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*The*  
**COMFORTABLE**  
*WINTER*  
*HOME*



CENTURY ENGINEERING CORPORATION  
Cedar Rapids, Iowa, U. S. A.





CENTURY HEAT

**-CENTURY-**  
YEARS OF SERVICE

TRADE MARK REG.

CAN'T BE BEAT

LISTED AS STANDARD AND APPROVED BY  
NEW YORK BOARD OF STANDARDS AND APPEAL  
UNDERWRITERS LABORATORIES  
MASSACHUSETTS DEPARTMENTS PUBLIC SAFETY  
CONNECTICUT DEPARTMENT STATE POLICE  
FIRE COMMISSIONERS EVERYWHERE



# Century Engineering Corporation

Main Office and Plant : : Cedar Rapids, Iowa

(1920's)

## *The Age of Progress*

It is only natural that we who are living in this modern age—the twentieth century—should endeavor to keep pace with the many changes which are constantly taking place. Within recent years we have seen the development of the Modern Automobile pass from the “Horseless Carriage” stage to the comfortable and luxurious limousine of today. We all remember the first announcement of the Wireless Telephone, but at that time no thought was given to the fact that we would some day enjoy the finest entertainment, both in speech and music, and all of it coming to us in our own home by simply turning the dial of a Radio set.

A similar advancement has been made in the field of heating. The old days of a stove in every room have passed. The central heating plant or furnace has taken its place. The coming of the furnace was hailed as a big improvement over the individual room stove although it still provided for all the disagreeable elements of dirt, soot, smoke and required the constant attention of a person to shovel coal, remove ashes, and clean the basement.

Now all this has passed and the modern and present day method of tending furnace is by regulating a thermostat on the wall of your room and connected with a Century Fuel Oil Burner in your basement. Thus eliminating forever the trouble, inconvenience and unnecessary work in keeping your home at a temperature which is just comfortable—just the exact degree wanted—day or night—in the coldest part of winter as well as in the spring and fall.

This modern convenience is now providing perfect heating comfort free from work and worry to thousands of homes throughout the United States and Canada. We hope the information contained in this booklet will enable you to secure a definite idea of how easy and economical this is being done. You do not go to the well any more to get your water—so why shovel coal?



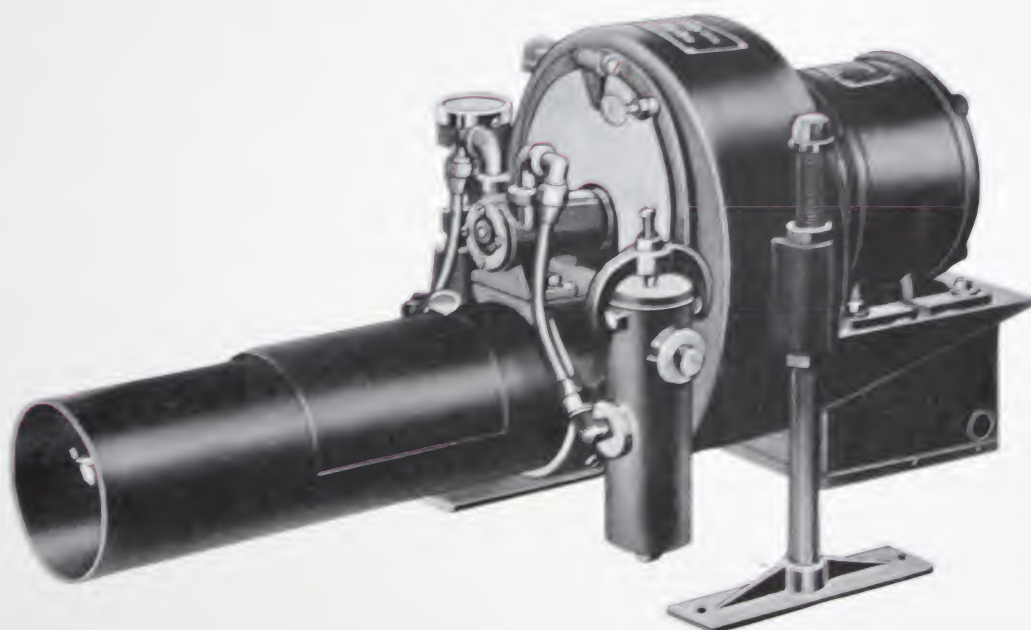
# Century Oil Burners

Are Adaptable for Use Under Any and All Conditions

**HOT WATER STEAM HOT AIR**

**COMMERCIAL**

**INDUSTRIAL**



## **SIMPLE CONSTRUCTION**

In selecting an oil burner, you should remember that you are buying a machine. The purpose of this machine is to give dependable and comfortable heat in order to prevent sickness and protect the health of you and your family.

Therefor considerable attention should be given to the mechanical part of the burner you buy. One look at the Simple Construction of the Century is sufficient to convince even those who are not familiar with machinery that all useless and unnecessary parts have been eliminated — in fact there is only one moving shaft in the entire construction of a Century Burner.

"You do not have to be a mechanic in order to own and operate a Century."

## When is an Oil Burner an Oil Burner?

Seven or eight years ago it was generally considered that an oil burner was an oil burner. In other words, the buying public had taken for granted that any mechanical contrivance which would burn oil and produce heat was a satisfactory oil burner. They had not learned to discriminate nor to investigate the different methods of burning oil or the different machines which converted oil into healthful and uniform heat.

Today it is different; the old saying that "experience is a great teacher" again proves itself to be true. A prospective purchaser of an oil burner at the present time knows that certain makes give better service than others, that there is a difference in the cost of operating one burner compared with another, that some burners are more noisy than others and more and more he is able to distinguish between the "ordinary" burner and one such as the CENTURY, which stands out from the crowd and wins a place at the top, not by high pressure selling methods or super advertising power, but by sheer merit alone.

Due to this greater discrimination and more exacting requirements which is being shown in the selection of an oil burner, CENTURY was chosen by more than five times as many people during 1930 than any preceding year. Is it any wonder, therefore, that we invite prospects to compare Century with other makes; see for yourself how many troublesome parts have been eliminated, how quiet and smooth it runs, how dependable and economical it is in service. With this knowledge it will be a pleasure instead of a problem for you to decide just what oil burner to install.



*The QUIET CENTURY will  
free you from heating troubles*







Owners of the Above Homes Have All Chosen Century



## Century Enthusiasm

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The original letters received from Century users are on file in our office and contain the following statements of the kind of service they are receiving.

"We use between nine and ten gallons of oil a day, which is much more economical than coal firing at \$7.50 a ton has been in the past."—Orono, Maine.

"It has kept my house warm and comfortable, and at less expense than by heating with coal."—Patchogue, New York.

"I cannot recommend the Century Fuel Oil Burner too highly, and would not hesitate to install another of the same make."—Patchogue, New York.

"I wish to say that I have found the Century Oil Burner very satisfactory."—Chicago, Ill.

"If it were not possible to buy another Oil Burner like it, I would not sell it for any amount of money."—Chicago, Ill.

"I have recommended your burner to many others."—Chicago, Ill.

"The oil the past winter will cost me just about 75% of my coal bill the mild winter before."—Tama, Iowa.

"I am well satisfied and believe it is the finest burner on the market."—Chicago, Ill.

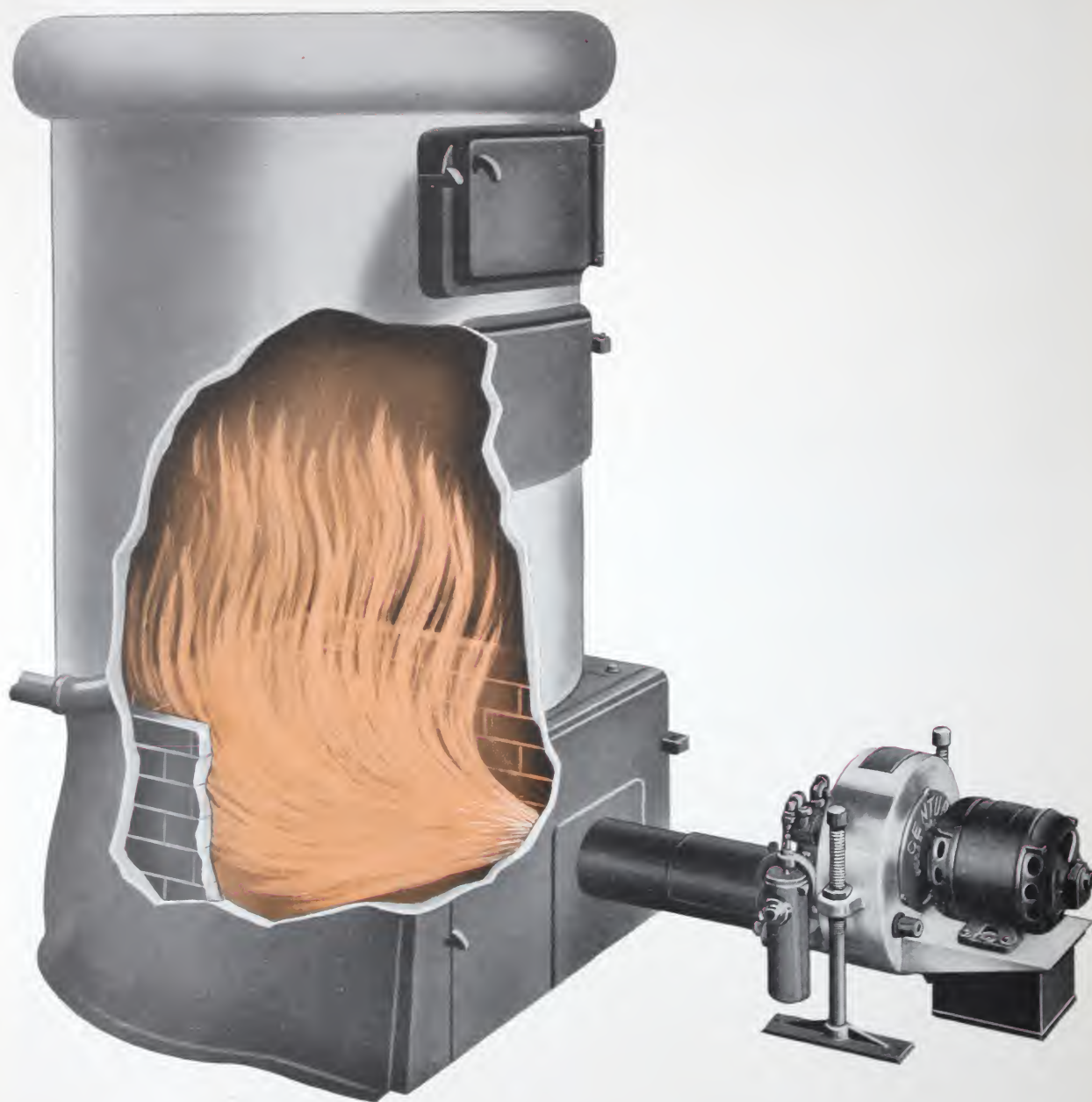
"As to the quietness of the burner, it is superior to any other make."—Portland, Oregon.

"We are delighted with its performance and absolute quietness."—Chester, New York.

"The Century Automatic Fuel Oil Burner was awarded FIRST PREMIUM BLUE RIBBON.

... The Century was demonstrated by us in actual operation. . . . there were eighteen well known burners participating."—Patchogue, New York.

"Much to my surprise the Century is so quiet that the only way I know it is operating is to open the cellar door."—Monroe, New York.



NO. 1-C CENTURY BURNER

The above phantom view of a Century Burner installed in a boiler illustrates the only changes necessary to be made in a heating plant before installing a Century Burner. Grates are removed and a Combustion Chamber is constructed by the use of fire brick. Special attention is called to the fact that no part of the burner is in the heat or path of flame at any time. Therefore there are no parts that can be burned or damaged as a result of excessive heat.



## CENTURY FACTORY VIEWS



No. 1 — A view of the machine department which is equipped with the latest improved machinery for making Century Parts. Modern production machinery of this type is responsible for the low price at which a Century can be purchased.



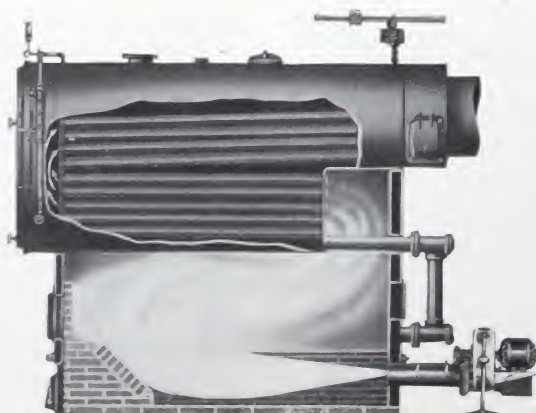
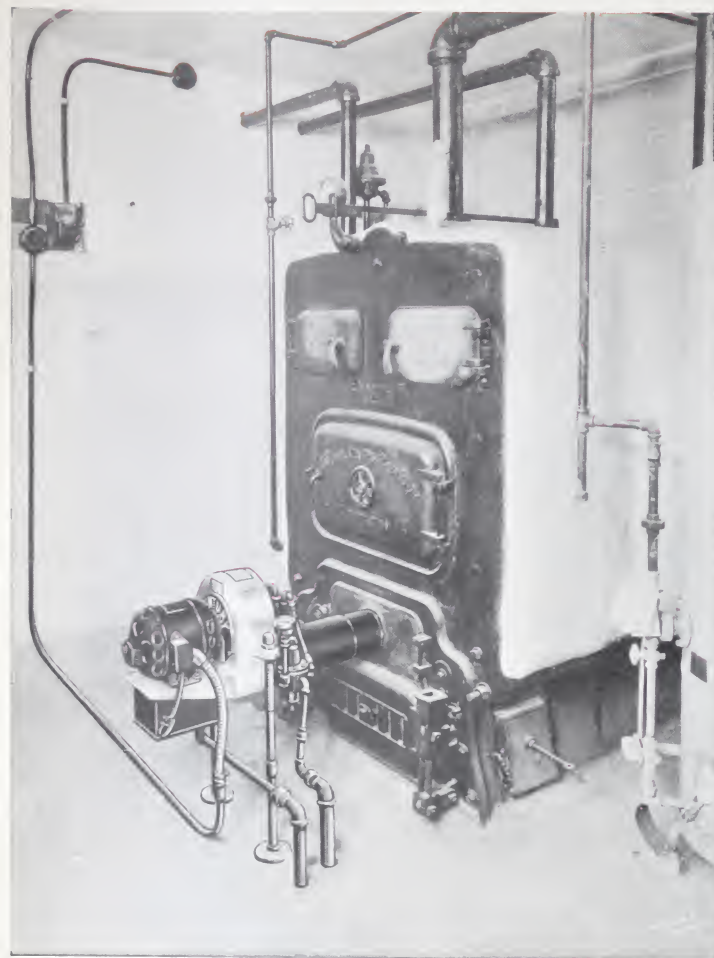
No. 2 — A view of the Century Assembly department where highly trained workmen assemble the Century from material which has been carefully selected and perfectly machined



No. 3 — A view of the Century testing furnaces where each Century burner is thoroughly tested by an expert testing engineer before shipping, thus making certain that each burner leaving the factory is in perfect operating condition.



No. 4 — The shipping department from which daily shipments of Century Burners are made, each one being properly and securely crated to insure arrival at its destination in perfect condition.



PACIFIC BOILER

The installation of a Century Burner is, after all, a simple matter. It requires very little time and can be done even in the coldest part of winter without seriously interfering with the comfort of the home. There are no parts within the furnace; grates are removed and the ash pit is lined with firebrick. No other changes are made in the heating plant.



# — Facts About Fuel Oil —

## PROPERTIES OF FUEL OIL AT 60° F.

Baume Gravity	Specific Gravity	Weight Lbs. Per Gal.	B. T. U. Per Pound	B. T. U. Per Gallon	B. T. U. Decrease Per Gallon
10	1.0000	8.33	18,280	152,272	.0%
12	.9859	8.21	18,400	151,064	.8%
15	.9655	8.04	18,580	149,383	1.1%
18	.9459	7.88	18,760	147,828	1.1%
20	.9333	7.78	18,880	146,886	.8%
24	.9090	7.57	19,120	144,738	1.5%
28	.8852	7.40	19,360	143,264	1.6%
32	.8612	7.21	19,600	141,316	1.5%
36	.8372	7.01	19,840	139,078	1.6%
40	.8132	6.86	20,080	137,748	1.5%

Note: The BTU decrease shown is the per cent difference between the heat unit contents per gallon of each gravity shown.

## PRE-HEATING FUEL OIL

Fuel Oil of low gravity requires pre-heating in order to permit complete mechanical atomization and the following table has been compiled giving the minimum temperature in degrees Fahrenheit at which Fuel Oil will atomize at an approximate efficiency of 100%.

Baume Gravity	Temperature	Baume Gravity	Temperature
10	300° F.	24	140° F.
12	280° F.	28	90° F.
15	260° F.	32	70° F.
18	220° F.	36	55° F.
20	180° F.	40	40° F.

## FUEL COMPARISONS

In the report of the Bureau of Standards, Department of Commerce, Washington, D. C., on the comparative furnace and boiler efficiency obtainable with coal and oil fuels, L. C. 133, it is assumed that in the average heating plant 50% of the BTU content of coal fuel is usefully applied, while an average of 62½% is obtainable with oil fuel.

Artificial gas, with the usual calorific value of 550 BTU per cu. ft. and a rate of \$1.00 per 1000 cu. ft. for heating purposes, gives a gross heat yield of 550,000 BTU per dollar.

Anthracite coal, with approximately 14,000 B. T. U. per lb., at an average cost of \$19.00 per ton delivered, has a gross yield of 1,473,700 B. T. U. per dollar.

Bituminous coal of the cheaper grades, usually used in firing large heating plants, with approximately 10,000 B. T. U. per lb. at an average cost of \$10.00 per ton delivered, has a gross yield of 2,000,000 B. T. U. per dollar.

Fuel Oil of 28-32 Baume gravity, the grade recommended for use with Century Fuel Oil Burners, with a B. T. U. content of 142,000 B. T. U. per gallon at an average cost of 6½ cents per gallon delivered, has a gross yield of 2,186,800 B. T. U. per dollar.

A comparison of the above fuels, without thought or allowance for the increased efficiency obtainable with oil fuel as shown by the report of the Bureau of Standards, shows the following ratio in favor of oil:

Fuel	Cost	BTU Content	BTU per Dollar
Artificial Gas	\$ 1.00 per M	550 per cu. ft.	550,000
Anthracite Coal	19.00 per ton	14,000 per lb.	1,473,700
Bituminous Coal	10.00 per ton	10,000 per lb.	2,000,000
<b>Fuel Oil 28-32°</b>	<b>.06½ per gal.</b>	<b>142,000 per gal.</b>	<b>2,186,800</b>

CENTURY HEAT

**-CENTURY-**  
YEARS OF SERVICE  
TRADE MARK REG.

CAN'T BE BEAT



Century Furnishes Comfortable Heat to the Above Group of Buildings



## More Century Enthusiasm

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"As you know, a hospital requires an even temperature. This was almost impossible with coal, unless we had a night fireman. However, with the Century Burner we are able to hold the temperature at any desired degree, day or night, and the labor expense is entirely eliminated.

As to cost, we think your burner has saved us money."

—Hospital in New York.

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"From a standpoint of efficiency of operation we have the highest praise—it has not been necessary to call on your service once during the entire time of operation. We call this marvelous performance for any Oil Burner. Our records indicate that over a period of the heating season we have approximately saved forty dollars (\$40.00) per week over coal."

—Large Office Building in New York City.

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"As you know, this burner was installed in January, 1929, and used continually throughout the remainder of the heating period, and the results obtained were highly satisfactory. At the time the building was constructed, the heating plant was provided with two boilers, but one burner and one boiler took care of our entire requirements throughout the season, and during this time we experienced some of the coldest winter weather we have had in Northern Illinois for many years."

—Masonic Temple, Freeport, Illinois.

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"I am a satisfied user of the Century Oil Burner. This past winter I used the Century Oil Burner in my Greenhouse, and in spite of the extreme cold, found it cheaper than coal.

"I tried two other burners, a gravity and a power burner, and find the Century far superior."

—Greenhouse, Clarion, Iowa.

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"We find with your Century Burner we are able to hold our desired temperature to the desired degree, night and day, and we only look at it once each day to see if it has water. As to cost we find your burner saves us enough time in labor to pay for the oil we burn."

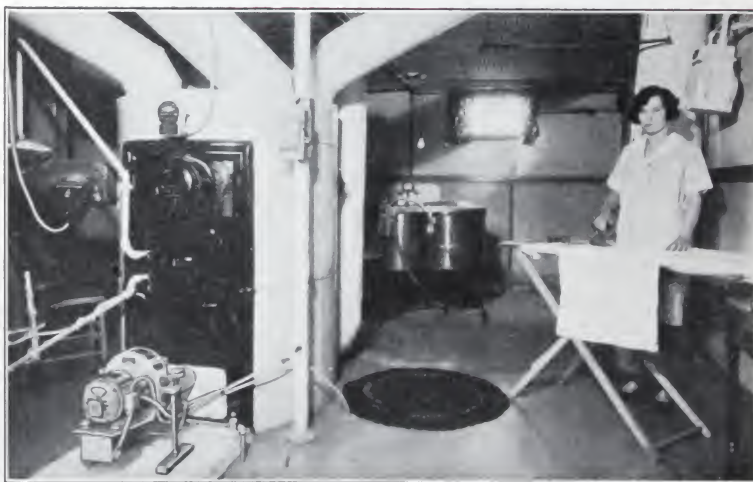
—Hatchery, Bellevue, Iowa.

## Make Use of an Extra Room



A Century Burner and a few decorations make a wonderful Billiard Room in the residence of Mr. J. E. Nesbitt, Patchogue, New York.

In the process of ironing, plenty of "elbow room" is needed. A Century Burner and a half gallon of white paint made a big difference in the home of W. B. Klingaman, Iowa City, Iowa.



There is no uniform size in the various basement furnace rooms. There is, however, considerable uniformity in their appearance—a layer of coal and ash dust on the floor—a black and sooty poker—a shovel—a few baskets of ashes waiting to be removed, and in general a very uninviting and unattractive place in which to spend more time than is absolutely necessary.

The pictures above are but two of the many ways your furnace room can be transformed into a livable and cozy amusement room—a safe place for the kiddies to play without disturbing the entire house, or a pleasant room in which to iron or sew.

By installing a CENTURY Burner you too can add this extra room to your home, which will always be warm, free from dust, dirt and smoke.



## THE CORRECT SIZE CENTURY IS AVAILABLE FOR ANY BUILDING REQUIREMENTS

Small,  
Medium  
or  
Large  
Size  
Homes



Apartments,  
Business  
or  
Public  
Buildings

### — SPECIFICATIONS —

#### Principle

Oil ATOMIZED UNDER PRESSURE thru CENTURY spray nozzle and mixed with air from fan.

#### Design

Exclusive CENTURY design, one unit construction. Nickel. Duco and Enamel Finish.

#### Motor

CENTURY, Induction type, 1750 RPM, 60 cycle, 110 V. Single Phase A. C., furnished as standard equipment. All other currents at slightly additional cost.

#### Pump

Rotary noiseless type, draws oil from supply tank and creates nozzle pressure.

#### Fan

CENTURY designed integral type, aluminum housing cast with base, balanced SIROCCO type fan.

#### Strainers

Strainers mounted on assembly, Century Quick Cleaning type, extra large screen area.

#### Drive

Exclusive Century design, one line shaft type, no moving or wearing parts.

#### Ignition

All models equipped with constant electric spark, non-vibrating transformer and Century Nicrome electrode assembly. Gas ignition furnished on specification only and on D. C. Specifications.

#### Controls

All automatic models furnished with Automatic Safety Switch, Stackswitch, and Thermoswitch. Boiler-switch extra. All Automatic Models passed by the Underwriters.

### — CAPACITIES —

MODEL	Nozzle Capacity	Steam Radiation	Hot Water Radiation	Boiler Horse Power
—1C	1½ - 2 - 2½ - 3 - 4 - 5	200 to 2000 sq. ft.	300 to 3000 sq. ft.	2 to 20 B. H. P.
—2C	5 - 10 - 15	2000 to 6000 sq. ft.	3000 to 9000 sq. ft.	20 to 60 B. H. P.
—3C	15 - 20 - 30 - 40	5000 to 15000 sq. ft.	8000 to 22000 sq. ft.	60 to 150 B. H. P.

For Hot Air Furnaces—

Grates 18 to 30 inches — No. 1-C

# The Century Engineering Corporation

You will be interested in knowing something about the company which manufactures the Century Fuel Oil Burner. Since 1923 the principals in the company, including the engineering staff, have been engaged in the manufacture of oil burning equipment. They have passed through all the various stages of oil burner development. In fact they have contributed their share of engineering skill and knowledge which has been responsible for the wonderful advance and progress made in the field of oil heating.

The present organization was formed in 1926 and incorporated under the laws of the State of Iowa the following year. At that time the name of Century Engineering Corporation came into existence, and its product was known as the Century Fuel Oil Burner.

The Century Engineering Corporation is a member of the Oil Heating Institute, as well as the American Oil Burner Association, and has ample capital to carry on and expand its business. Due to its ideal location in a city where highly skilled labor can be secured at a reasonable wage, it can maintain its present low manufacturing and operating cost and pass this saving on to the Century user.

You are thus protected in your purchase of a Century Burner by knowing that the company behind it is headed by men with years of experience in the production of oil heaters; that the business rests on a solid foundation of sound business principles, and its product is of the highest quality with guaranteed satisfaction.

A Certificate of unconditional warrantee against defects in material and workmanship, is furnished the owner by the manufacturer with each Century Burner at time of installation.

**CENTURY ENGINEERING CORPORATION**

215 Fourth Avenue

CEDAR RAPIDS, IOWA





